contribution to the discussion of the struggle for life among a single species on a small island.

Three years ago Mr. Evans was stricken down by what with most men would have been a fatal illness. But his strength of constitution and marvellous determination of character enabled him to recover sufficiently to be once more able to resume his voyaging in the *Aster*. Deer-stalking, however, with all its joys among the corries of Jura was no longer possible for him. Accordingly he gave up his deer-forest and purchased the beautiful estate of Ascog, in Bute, which he immediately set about to alter and improve. At the end of June last he started with a few friends on what proved to be his longest and last cruise. Under pleasant conditions of weather he visited all his favourite haunts—the cliffs of Mingulay and Barra Head, the sea-lochs of the chain of the Outer Hebrides, the precipices of St. Kilda with their vast swarms of sea-fowl, the fjords of western Sutherland, the cliffs and inlets of Orkney, and the voes and furthest islets of Shetland. In many of these places the *Aster* was a familiar visitor, and was received with blowing of horns and other signs of welcome. At St. Kilda the villagers ran up their flag, and half the population came out in a couple of boats to see their old friend and benefactor, who never failed to bring them some token of his thoughtful interest in their welfare. The cruise was successfully completed by the return of the yacht to Oban, but before the final day, which was to include the rounding of the Mull of Cantyre and the passage up the Firth of Clyde to Bute, it was resolved to anchor opposite the old Jura home and to spend there the following Sunday (July 24). Mr. Evans had been remarkably well all the voyage, and was delighted to have successfully accomplished all that he had wished to do. On reaching Jura he went ashore for a short walk along the coast-road. He had hardly landed, however, and was in the act of conversing with an old gamekeeper who had come down to greet him when he dropped dead as he sat. His retiring modesty kept him from making many friends, but his frank and kindly nature and his vein of quaint humour endeared him to the restricted circle that was privileged with his friendship. He will be mourned by many a lowly family in the west of Scotland that has good reason to remember his cheery greeting and his generous help. He has left a benefaction to the museum of Cambridge University, which has already been enriched by valuable contributions from him in his life-time. A. G.

NOTES.

CAPTAIN ARTHUR MOSTYN FIELD, R.N., has been appointed successor to Rear-Admiral Sir W. J. L. Wharton, K.C.B., F.R.S., as hydrographer to the Navy, the retirement of Sir William Wharton having taken place on Monday last.

THE next annual meeting of the British Medical Association will take place in Leicester, the president-elect being Mr. G. C. Franklin, senior surgeon to the Leicester Infirmary. The council of the association will recommend that the meeting in 1906 be held in Toronto.

THE next session of the American Medical Association will take place from July 11 to 14, 1905, at Portland, Oregon, under the presidency of Dr. Louis S. McMurtry, of Louisville, Kentucky.

THE Board of Estimate of the City of New York has voted the sum of 2000*l.* towards an investigation by a commission of medical experts as to the contagious nature or otherwise of pneumonia.

THE FitzPatrick lectures at the Royal College of Physicians for the present year will be delivered by Dr. J. Frank Payne on November 8 and 11, the titles being respectively "Gilbertus Anglicus and Medicine in the Anglo-Norman Period," and "Ricardus Anglicus and the History of Anatomy in the Middle Ages." The Bradshaw lecture will be delivered on November 15, the lecturer—Dr. F. F. Caiger—taking as his subject "The Treatment of Enteric Fever."

THE following lecture arrangements for 1905 have been made in connection with the Royal College of Physicians:—The Goulstonian lecturer will be Dr. W. C. Bosanquet; the Milroy, Dr. T. M. Legge; the Lumleian, Dr. W. H. Allchin; the Oliver Sharpey, Dr. L. E. Hill; the FitzPatrick, Dr. Norman Moore

AN American Society of Tropical Medicine has been started in Philadelphia. Dr. T. H. Fenton is the first president, and a number of men of science who have made researches in the prevention of tropical diseases have been elected honorary members. Among the latter we notice the names of Sir Patrick Manson, F.R.S., Dr. C. J. Martin, F.R.S., and Prof. R. Koch.

JOHNS HOPKINS UNIVERSITY is, it is reported, about to undertake systematic work on the subject of tuberculosis. Mr. Henry Phipps, of Pittsburg, has given the sum of 4000*l.*, by the help of which a dispensary building is to be erected so arranged that the treatment of patients may be attended to and the disease investigated.

A REUTER telegram published in the *Times* states that according to a private telegram published by the *Verdens Gang* from Finaes, in Finland, the captain of a vessel from Tromsö reports having found a bottle containing a letter sent off from M. Andrée's Polar balloon expedition. The bottle, which was picked up on a small island north of Spitsbergen, contains a letter bearing a date in 1898. Particulars as to the contents of the letter will not be available for another month. A private telegram from Finaes published by the *Landsblad* says that the bottle was found on the island of Moffen, to the north of Spitsbergen.

A BOARD of Agriculture has recently been established in the Bahamas, and a botanic station is to be started in connection with it for which a curator will be required. Applications for the post should be made in the first instance to the Imperial Commissioner of Agriculture for the West Indies, Barbados.

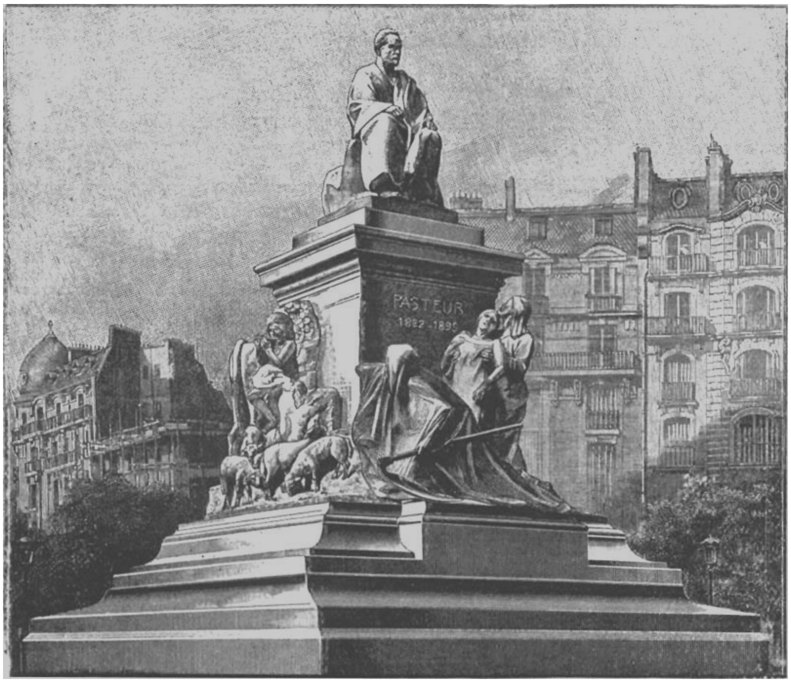
THE Barker anatomical prize of thirty guineas has been awarded to Mr. Charles Coöper, a student in the Royal College of Surgeons, Dublin. The prize is offered annually, and is open to all students in any medical school in the United Kingdom. This is the fifth successive year the prize has been conferred on a student of a Dublin college.

THE St. Bartholomew's Hospital testimonial to Mr. Alfred Willett will, says the *Lancet*, take the form of a silver medal to be known as the "Willett medal," which will be awarded each year to the candidate obtaining the highest marks in operative surgery in the Brackenbury surgical scholarship. A gold medal of the same design will be presented to Mr. Willett.

THE death is announced of Prof. Simonds, formerly principal of the Royal Veterinary College, and consulting veterinary surgeon to the Royal Agricultural Society. Prof. Simonds made many researches into the diseases of animals, and became professional adviser to the Privy Council in all matters relating to the regulations and supervision of the cattle trade.

ACCORDING to the *Scientific American*, the patents of the De Forest and Maskelyne wireless telegraphy systems have been amalgamated. The object of the combination is the employment of wireless telegraphy as a feeder for cable telegraphic systems. In cooperation with the cable companies, it is proposed to link isolated islands with the nearest cable stations, and to develop wireless communication between ships and shore, and between vessels at sea. This combination will, it is thought, strengthen both systems. The De Forest apparatus is a sound recorder, the messages being received on the principle of a telephone, while the Maskelyne system is a tape recorder. By this amalgamation, therefore, either system will be available according to requirements.

FALGUIÈRE'S monument to the memory of Pasteur was, as announced in NATURE of July 21, unveiled in Paris by President Loubet on July 16. The monument is the result of an international subscription, and may be regarded as a world-wide tribute to the memory of a great man of science. The illustration, reproduced from *La Nature*, serves to convey an excellent idea of the memorial. The whole monument is about seven metres in height, of which a little more than four metres form the pedestal. Pasteur is shown seated and in deep thought. Beneath the statue round the pedestal are grouped allegorical figures which recall very naturally the successive discoveries made by Pasteur. On the front face of the pedestal occur the words "Pasteur 1822–1895," and underneath the inscription "Ce monument est dû à une souscription internationale."



A STATUE to Jan Pieter Minckelers, the reputed discoverer of coal gas, was unveiled last month in Maastricht, Holland. Minckelers was born in 1748, and became in 1772 professor of physics in the University of Louvain, where in 1784, in endeavouring to discover a substitute for hydrogen, he succeeded in obtaining from the distillation of powdered coal a gas which he called "inflammable air." It was in 1785 that he first utilised the gas for lighting purposes, when a class-room in the Louvain University was illuminated by his method. He died in 1824 at the age of seventy-six years.

THE first annual convention of the British Foundrymen's Association was begun on Tuesday last at Manchester, when the president, Mr. Buchanan, delivered his inaugural address. Papers on the structure of metal and alloys, illustrated by photomicrographs of types of cast iron, steel, brass, and bronze, used in foundry practice, by Mr. Percy Longmuir (Carnegie medallist), and strength tests of cast metals, by Mr. W. T. MacCall, were read and discussed, and on Wednesday visits were paid to some industrial centres.

SEVERAL parts of Paris being so infested with mosquitoes, the matter of their suppression has been considered by the Conseil d'Hygiène et de Salubrité de la Seine, which, according to the Paris correspondent of the *Lancet*, recently adopted certain conclusions of which the following is a summary:—In the first place stagnant water where their eggs are hatched and localities where the insects collect, such as cellars, sewers, and dark places, ought to be kept under observation. Drains and sewers of all kinds, and the openings of the pipes which supply water in the streets, should be regularly inspected to avoid collections of stagnant water, and insects assembling in numbers should be destroyed either by a burning torch or by lime-washing. Roofs and rain-water gutters ought to be examined, and water ought not to be allowed to lodge in the gutters. Nothing capable of holding water should be placed in front of windows, and places which are the haunts of mosquitoes should be well ventilated. Stagnant water should not be allowed to remain in gardens and courtyards. Fountains and basins in public places should be emptied and cleansed at least once a week, and plenty of fish should be kept in large sheets of water. In basins and casks standing on private ground there should be a layer of petroleum oil on the surface of the water (about a gram per square metre), or if the water contains fish a layer of salad oil. The public should be advised to use mosquito curtains. Mosquito bites should be treated with a drop of tincture of iodine or with a drop of a solution of guaiacol of 1 per cent. strength.

ACCORDING to the *Lancet*, Dr. W. H. Symons, medical officer of health, Bath, has completed a geological model of the City of Bath and the surrounding district covering an area of 36 square miles. The horizontal scale is six inches to the mile, and the vertical scale is six inches to 1000 feet. The model has been placed in the museum of the Royal Literary and Philosophical Institution of the city.

PROF. SCHÄFER, F.R.S., describes a simple and efficient method of performing artificial respiration in the human subject, especially in cases of drowning (*Med. Chirurg. Trans.*, vol. lxxxvii.). Immediately the patient is recovered from the water he is placed face downwards, the head being turned sideways so that the mouth and nose are unobstructed, with a folded coat under the lower part of the chest; if respiration has ceased every instant of delay is serious. The operator then places himself athwart, or on one side of, the patient's body in a kneeling posture and facing the head. He places his hands flat over the lower part of the back (on the lowest ribs), one on each side, and gradually throws the weight of his body on to them so as to produce firm pressure—which must not be violent—on the patient's chest. This compresses the chest, and air (and water if there be any) is driven out of the patient's lungs. He then raises his body slowly so as to remove the pressure, still keeping his hands in position. This process of applying pressure and of relaxation of pressure by the forward and backward movement of the operator's body is repeated every four or five seconds without any marked pause between the movements. This course must be pursued for at least half an hour, or until the natural respirations are resumed. If the respirations after being established tend to fail, the process of artificial respiration must again be resorted to. If there be means, others may remove the wet clothing by cutting it off, and may apply hot flannels to the body and limbs and hot bottles to the feet, but nothing should be allowed to interfere with the regular and systematic application of artificial respiration. No attempt should be made to give restoratives by the mouth until natural breathing has re-commenced. In another paper Prof. Schäfer gives the results of the experiments he has performed, showing the efficiency of his system of treatment (*Proc.* Roy. Soc. Edin., xxv., part i.).

IT has always been more or less tacitly assumed that the difficulties which attend respiration at great altitudes are due solely to the diminished tension of the atmospheric oxygen. Two papers by A. Mosso in the *Atti dei Lincei* for June 19 would tend to disprove this assumption. It is shown, in the first place, that when the barometric pressure of a mixture of oxygen and nitrogen is diminished to one-third of an atmosphere, whilst the proportion of oxygen is increased so that its partial pressure is the same as in ordinary circumstances, severe inconvenience is incurred by breathing the mixture, and an abnormal respiration and pulse frequency are produced. That this is due not merely to the increased proportion of oxygen is shown by a study of the effects produced by breathing pure oxygen on the summit of Monte Rosa. Analyses of the blood indicate that a diminution in the proportion of carbon dioxide, caused by the low pressure, is probably responsible for the result, and this view is upheld by the fact that a mixture of oxygen and carbon dioxide, containing 20 per cent. of the latter, which on being inhaled in Turin caused giddiness and vomiting was breathed with ease and a sense of pleasure on Monte Rosa.

IN a paper by G. Gallo in the same number of the *Atti* an account is given of the conditions under which tellurium can be estimated electrolytically. Previous attempts to effect the electrolytic deposition of the element have been unsatisfactory because of the powdery nature of the product. It is now shown that the presence of sodium pyrophosphate in the electrolysed solution causes the tellurium to be deposited as a firmly adherent film; when, by saturating the solution with carbon dioxide, this film is protected from oxidation, its weight corresponds with a quantitative separation.

IN the same journal for July 3 appear two papers of considerable physiological interest. In the first, by A. Mosso and G. Galeotti, it is shown that when alcohol is ingested at great altitudes, for instance at the summit of Monte Rosa, it fails altogether to produce its usual characteristic effects. There is no indication of either excitement or intoxication, and it appears that at such a height the nerve cells are no longer responsive to alcoholic stimulus. The second paper, by A. Herlitzka, deals with the self-digestion of pepsin. From the experiments described it is concluded that, as a proteid, pepsin is capable of being digested by itself to form peptone, and that this change always occurs in a warm aqueous solution of pepsin containing hydrochloric acid. A falling-off of the digestive activity with regard to other proteids is a measure of the gradual change.

IN the *Memorie* of the R. Ist. Bologna (series vi., vol. i.) Prof. Augusto Righi describes a number of measurements he has made on the radio-activity of common metals. The rate of discharge, in dry carbon dioxide gas, of an especially constructed single-leaf electroscope of small capacity was observed when the leaf was hanging immediately above a disc of the metal in question. It was found that nearly all the common metals had practically the same ionising effect as glass; lead and bismuth were exceptions, their power of rendering a gas conducting being abnormally great. The observation is of significance because particularly active modifications of lead and bismuth have already been obtained by other workers.

A FURTHER contribution to the subject of Mendelian laws by Mr. C. C. Hurst appears in the *Journal* of the Royal Horticultural Society (May), wherein he describes his experiments upon heredity in peas, undertaken with the object of repeating Mendel's original observations; an important point is the consideration of the histological difference between races, as, for instance, between *round* and *wrinkled* peas. In the same volume will be found two papers devoted to the iris. In the first Miss Armitage treats of bulbous irises for the rock garden, and of rhizomatous species for the water garden, and appends a list of phenological observations which shows that by judicious selection of species it is possible to have iris flowers continuously for eight months; the variability of the flower, and the distinction between *bearded* and *beardless* irises is the subject of an article by Mr. W. J. Caparne.

IT has been stated on good authority that more than half of the waste lands in Ireland are suitable for forest plantations, and Dr. Henry, in the course of a lecture on "Forests, Wild and Cultivated," delivered before the Royal Society of Dublin in February, advanced further arguments in favour of afforestation. He pointed out that Ireland possesses an ideal forest climate on account of the heavy rainfall, the mild climate, and the absence of cold winds in winter. To illustrate his remarks on forest management, the author took his descriptions from French practice, including plantations in the districts of the Jura and the Vosges, and in the Landes, where successful results have been obtained with a strict regard for economy.

THE Natural History Museum recently received from Osborne House two mounted heads and one skull of Spanish draught oxen, sent by command of His Majesty the King. They have remarkably fine horns, and serve to illustrate the difference between this handsome breed and the Spanish fighting bull, of which an entire specimen has been exhibited for the past few years.

To *Naturen* for June and July Dr. L. Stejneger, of the U.S. National Museum, communicates an interesting paper on the "Celtic pony" recently described by Prof. J. C. Ewart and its relation to the now extinct tarpan of the Russian steppes, and to a Norwegian breed termed the "fjordhest." All appear to be closely related, if not, indeed, identical, the tarpan and the "fjordhest," at any rate, frequently lacking the callosity on the hind limb.

JUDGING from the fact that the one on the brain of the sheep has reached a third edition, Dr. B. G. Wilder's "Physiology Practicums," published by the author at Ithaca, U.S.A., appear to have attained the success they deserve. Seven plates illustrate the part before us.

No interruption to the steady pursuit of science in Japan appears to be caused by the war, three parts (one of them of exceptional thickness) of the *Journal* of the College of Science of Tokyo having reached us by last mail. The first of these (vol. xviii., art. 7), which comprises no less than 307 pages of text, illustrated by 23 plates, is devoted to the fourth instalment of Dr. I. Ijima's studies on the hexactinellid sponges. In this section the author treats of the family Rossellidæ, which he divides into three subfamilies. Of the other two parts to hand, one (vol. xix., art. 14) contains a study by Mr. K. Yendo of the genicula of the calcareous algas of the group Corallinæ, while the other (vol. xix., arts. 18 and 19) is devoted to descriptions of certain low plant-organisms by Mr. K. Saito.

THE *Entomologists' Monthly Magazine* for August contains notes by Mr. J. R. Tomlin on Manx beetles, which are said to be of interest in respect to island faunas, while Mr. J. J. Walker, who has recently visited Melbourne, contributes a notice of his inspection of the Curtis collection of British insects preserved in the museum of that city. This collection, it appears, was purchased about 1864 from the widow of Mr. J. Curtis. According to Mr. Walker, it contains the types of several of Curtis's species or varieties —it is a pity that these should be in Australia.

THE *Biologisches Centralblatt* for July 15 contains the third instalment of an article by Mr. G. Klebs on the problem of development, the author in this instance discussing the evidence afforded by the lower plants. Dr. W. Petersen concludes his essay on the value of "indifferent" characters as species distinctions, and Dr. W. Volz communicates a note on the distribution of the two species of gibbon inhabiting Sumatra.

IN the *Bulletin de la Classe des Sciences* (Brussels), 1904, No. 3, M. P. Mansion directs attention to the new international language proposed by Prof. Peano in the form of "Latin without inflexions." The attempts at building up a universal language in the forms of the Volapük of Schleyer and the Esperanto of Dr. Zamenhof have both met with considerable success, but it was left for the mathematician of Turin to reduce the problem to what may be regarded as the limit of simplicity by proposing, in 1903, a modification of Latin, in which not only genders, persons, cases, and numbers are abolished, as previously suggested by Leibnitz, but even tenses and moods are no longer retained. This system would not only have the advantage of making Latin the language of the learned world, as it used to be in the middle ages, but it could be very easily introduced owing to the extent to which Latin is taught in schools all the world over.

M. E. S. LONDON has carried out a number of experiments on the physiological and pathological actions of the radium emanations derived from 10 milligrams of radium bromide dissolved in 10 cubic centimetres of water (*Arch. d'Électricité méd.*, No. 142, 1904). Frogs and mice exposed to the emanations for 5–6 days became ill and died, hæmolysis occurred in defibrinated blood exposed for two or three days, and the vitality of bacterial cultures was destroyed after an exposure of two days. The gastric and pancreatic ferments were, however, unaffected by the emanations.

THE commission consisting of Colonel Bruce, F.R.S. (chairman), Major Horrocks, Staff-Surgeon Shaw, R.N., Dr. Zammit, chemical analyst and bacteriologist to the Government of Malta, and Dr. R. Johnstone, of the Local Government Board, has begun its work of investigating the etiology and pathology of Mediterranean or Malta fever. The experimental work is being carried on at the laboratories of the Naval Hospital, of the Army Station Hospital, and at the offices of the Board of Health, Malta. The disease, says the *British Medical Journal*, is the cause not only of many deaths among sailors and soldiers, but also of much invaliding, which is all the greater owing to the prolonged course which the disease commonly runs even in cases which ultimately recover. While it is known that the disease is due to a specific microbe, the *Micrococcus melitensis*, very little has yet been certainly ascertained as to the mode in which the specific agent maintains its existence and how infection is contracted. A knowledge of these points in etiology is an essential preliminary to devising and enforcing effective prophylactic measures.

THE Röntgen Society will in future publish its proceedings in its own journal, which will appear as a bi-monthly "during the working session." The first part of the *Journal*, dated July, has just reached us, and is a well produced periodical which should be of service to radiographers. In addition to four full-page process plates, a separate photogravure portrait of Prof. Silvanus P. Thompson, F.R.S. (the first president of the Röntgen Society), is issued with the number.

MESSRS. NEWTON AND CO.'s new list of X-ray and high frequency apparatus has reached us. It contains particulars of the latest forms of apparatus made by this firm, and should be seen by all workers in this branch of science.

THE summer number of the *Chemist and Druggist* (dated July 30) contains an article on Sir William Ramsay and his work. The paper contains a full-page illustration showing Sir William Ramsay in his laboratory experimenting with radium. The *Scientific American* for July 23 also has a page illustration of Sir William Ramsay in his laboratory, the original photograph of which was specially taken for our American contemporary.

SEVERAL of the August issues of the monthly magazines that have reached us contain articles dealing with subjects of a more or less scientific character. Thus *Chambers's Journal* has a contribution entitled "A Visit to a Wild-Animal Farm," the farm in question being that belonging to Mr. R. Leadbetter in Buckinghamshire, and known as Hazlemere Park; *Good Words* contains an appreciation of Stanley and a summary of the results of his work by Sir Harry Johnston; and in *Pearson's Magazine*, under the title of "Two Thousand Photographs a Second," the electro-stereo-chromophotographic camera invented by M. Lucien Bull for the photography of insects in flight is described and graphically illustrated.